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INFORMATION DISCLOSURE STATEMENT BY APPLICANT			
(use as many sheets as necessary)			
Sheet	1	of	1
		Attorney Docket Number	
		GP123-02.UT	
		Application Number	
		10/020,596	
		Filing Date	
		December 7, 2001	
		First Named Inventor	
		BECKER	
		Group Art Unit	
		1634	
		Examiner Name	
		Chakrabarti, A. SISSON	

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Signature	B. J. Lusion	Date Considered	3-29-04
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 4

Complete if Known

Application Number	10/020,596
Filing Date	December 7, 2001
First Named Inventor	BECKER
Group Art Unit	1648 1634
Examiner Name	HILL, M. S. L. SISON
Attorney Docket Number	GP123-02.UT

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
BLS		ASAYAMA et al., "Design of Comb-Type Polyamine Copolymers for a Novel pH-Sensitive DNA Carrier", Bioconjug Chem, 1997 Nov-Dec;8(6):833-8, American Chemical Society, US	
		BLOOMFIELD, "Condensation of DNA by Multivalent Cations: Considerations on Mechanism", Biopolymers, 1991 Nov;31(13):1471-81, John Wiley & Sons Incorporated, US	
		BLOOMFIELD, "DNA condensation", Curr Opin Struct Biol, 1996 Jun;6(3):334-41, Current Biology Ltd., GB	
		FERDOUS et al., "Comb-Type Copolymer: Stabilization of Triplex DNA and Possible Application in Antigenic Strategy", J Pharm Sci, 1998 Nov;87(11):1400-5, American Pharmaceutical Association, US	
		FERDOUS et al., "Inhibition of Sequence-Specific Protein-DNA Interaction and Restriction Endonuclease Cleavage via Triplex Stabilization by Poly(L-lysine)-graft-dextran Copolymer", Biomacromolecules, 2000 Summer;1(2):186-93, American Chemical Society, US	
		FERDOUS et al., "Mechanism of Intermolecular Purine-Purine-Pyrimidine Triple Helix Stabilization by Comb-Type Polylysine Graft Copolymer at Physiologic Potassium Concentration", Bioconjug Chem, 2000 Jul-Aug;11(4):520-6, American Chemical Society, US	
		FERDOUS et al., "Poly(L-lysine)-graft-dextran copolymer: amazing effects on triplex stabilization under physiological pH and ionic conditions (in vitro)", Nucleic Acids Res, 1998 Sep 1;26(17):3949-54, Oxford University Press, GB	
		FERDOUS et al., "Poly(L-lysine)-graft-dextran copolymer is a novel stabilizer of triplex DNA(II): potassium-insensitive triplex formation", Nucleic Acids Symp Ser, 1997;37:301-2, Oxford University Press, GB	
		FERDOUS et al., "Relative Effects of Graft Copolymer and Polyamines on Triplex Stabilization Under Physiological Conditions", Nucleosides Nucleotides, 1999 Jun-Jul;18(6-7):1651-3, Marcel Dekker Incorporated, US	
		KIM et al., "Acceleration of DNA strand exchange by polycation comb-type copolymer", Nucleic Acids Symp Ser, 1999;42:139-40, Oxford University Press, GB	
		KIM et al., "Comb-Type Cationic Copolymer Expedites DNA Strand Exchange while Stabilizing DNA Duplex", Chem Eur J, 2001 Jan 5;7(1):176-80, Wiley-VCH Verlag GmbH, DE	
		LUO et al., "Synthetic DNA delivery systems", Nat Biotechnol, 2000 Jan;18(1):33-7, Nature America Incorporated, US	
BLS		MAJLESSI et al., "Advantages of 2'-O-methyl oligoribonucleotide probes for detecting RNA targets", Nucleic Acids Res, 1998 May 1;26(9):2224-9, Oxford University Press, GB	

Examiner Signature

B. Sison

Date Considered

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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

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Sheet

3

of

4

Complete If Known

Application Number	10/020,596
Filing Date	December 7, 2001
First Named Inventor	BECKER
Group Art Unit	1648 1634
Examiner Name	HILL M. SLOSSON
Attorney Docket Number	GP123-02.UT

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
(B) f		MARUYAMA et al., "Characterization of Interpolyelectrolyte Complexes between Double-Stranded DNA and Polylysine Comb-Type Copolymers Having Hydrophilic Side Chains", Bioconjug Chem, 1998 Mar-Apr;9(2):292-9, American Chemical Society, US	
		MARUYAMA et al., "Comb-Type Copolymers for Controlled DNA Delivery", Nucleosides Nucleotides, 1999 Jun-Jul;18(6-7):1681-2, Marcel Dekker Incorporated, US	
		MARUYAMA et al., "Comb-Type Polycations Effectively Stabilize DNA Triplex", Bioconjug Chem, 1997 Jan-Feb;8(1):3-6, American Chemical Society, US	
		MARUYAMA et al., "Nanoparticle DNA Carrier with Poly(L-lysine) Grafted Polysaccharide Copolymer and Poly(D,L-lactic acid)", Bioconjug Chem, 1997 Sep-Oct;8(5):735-42, American Chemical Society, US	
		MARUYAMA et al., "Poly(L-lysine)-graft-dextran copolymer is a novel stabilizer of triplex DNA (I): stabilization of poly(dA).2poly(dT) triplex", Nucleic Acids Symp Ser, 1997;37:225-6, Oxford University Press, GB	
		MARUYAMA et al., "Preparation and evaluation of ODN conjugates with polycation comb-type copolymer", Nucleic Acids Symp Ser, 1999;42:97-8, Oxford University Press, GB	
		PORSCHKE, "Nature of Protamine-DNA Complexes A Special Type of Ligand Binding Co-operativity", J Mol Biol, 1991 Nov 20;222(2):423-33, Academic Press Limited, GB	
		RENZ et al., "A colorimetric method for DNA hybridization", Nucleic Acids Res, 1984 Apr 25; 12(8):3435-44, Oxford University Press, GB	
		SIKORAV, "Complementary Recognition in Condensed DNA: Accelerated DNA Renaturation", J Mol Biol, 1991 Dec 20;222(4):1085-108, Academic Press Limited, GB	
		TORIGOE et al., "Poly(L-lysine)-graft-dextran Copolymer Promotes Pyrimidine Motif Triplex DNA Formation at Physiological pH", J Biol Chem, 1999 Mar 5;274(10):6161-7, American Society for Biochemistry and Molecular Biology, US	
		TORIGOE et al., "Promotion mechanism of triplex DNA formation by comb-type polycations: Thermodynamic analyses of sequence specificity and ionic strength dependence", Nucleic Acids Symp Ser, 1999;42:137-8, Oxford University Press, GB	
		TRUBETSKOY et al., "Layer-by-layer deposition of oppositely charged polyelectrolytes on the surface of condensed DNA particles", Nucleic Acids Res, 1999 Aug 1;27(15):3090-5, Oxford University Press, GB	
(B) f		WAHL et al., "Efficient transfer of large DNA fragments from agarose gels to diazobenzyloxymethyl-paper and rapid hybridization by using dextran sulfate", Proc Natl Acad Sci USA, 1979 Aug;76(8):3693-7, National Academy Press, US	

Examiner
Signature

B. R. Slosson

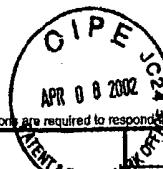
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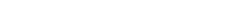
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		First Named Inventor	BECKER
		Group Art Unit	4648 / 634
		Examiner Name	HILL, M. S/ISSON
Sheet	4	of	4
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